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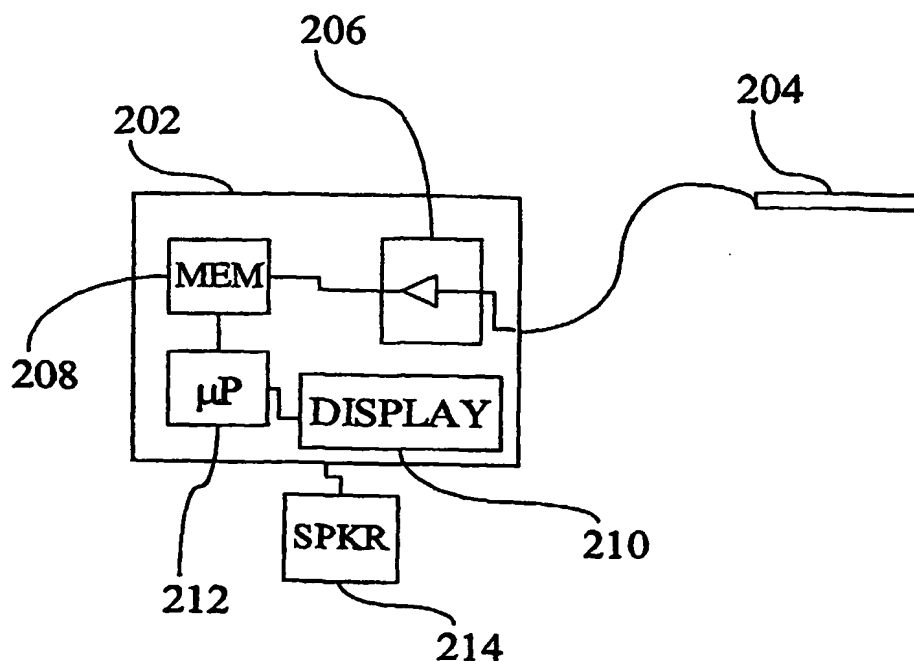
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[Continued on next page]

(54) Title: MICROELECTRODE RECORDING ANALYSIS AND VISUALIZATION FOR IMPROVED TARGET LOCALIZATION



(57) Abstract: Methods of processing neuronal signals include processing microelectrode recordings (MERs) or portions of MERs to provide arrays of associated values, such as estimates of power spectral density, or a marginal probability distribution, or a rate of change of a spike rate. Such arrays of values can be displayed, and a classifier can be applied to, for example, aid in associating a MER with a particular brain feature.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12192

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 05/00

US CL : 600/544

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/544-547;

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
east - key words microelectronic recording

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — A	US 6,330,466 B1 (HOFFMAN et al.) 11 December 2001, see entire document.	1, 3, 8-11, 14 2, 4-7, 12, 13, 15-25
X — A	US 6,128,527 A (HOWARD, III et al) 03 October 2000, see entire document.	1, 4, 11, 12, 23 2, 3, 5-10, 12-22, 24, 25
A	US 6,516,246 B2 (DERAKHSHAN) 04 February 2003, see entire document.	1-25
A	US 5,314,495 A (KOVACS) 24 May 1994, see entire document.	1-25



Further documents are listed in the continuation of Box C.



See patent family annex.

### \* Special categories of cited documents:

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later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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# INTERNATIONAL SEARCH REPORT

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Continuation of Item 4 of the first sheet:

The title is objected to under PCT Rule 4.3 in that it exceeds 7 words

NEW TITLE: Microelectrode recording analysis for improved target localization